

Amendments to the Drawings

Please delete Fig. 5. No replacements sheets are required. No amendments to the specification are necessary.

REMARKS

The present response cancels claim 13 without prejudice or disclaimer as to the subject matter recited therein. In addition, Fig. 5 has been deleted in its entirety. Moreover, claims 1, 4-6, and 11, as well as various portions of the specification, have been amended. Claims 1-12 remain pending in the captioned case. Further examination and reconsideration of the presently claimed application are respectfully requested.

Objection to Declaration

An objection was lodged against the Declaration as being defective. In response thereto, enclosed herewith is a corrected Declaration which identifies the mailing address and citizenship of each inventor. Applicants submit that the Declaration was properly executed at the time of filing the Response to Notice to File Missing Parts, but that the signature pages were inadvertently switched with those of the Assignment, also submitted with the Response to Notice to File Missing Parts. Accordingly, Applicants respectfully request the enclosed Declaration be accepted and the objection be removed.

Objection to the Specification

Objections were lodged against the specification for various informalities. In response thereto, amendments have been made to the specification as suggested by the Examiner. Specifically, the abstract has been corrected, the title has been added to the first page of the specification, various typographical and/or grammatical errors have been corrected within the body of the specification, and Fig. 5 has been removed since only Figs. 1-4 are described in the specification. Accordingly, Applicants respectfully request these objections be removed.

Objection to the Claims

Objections were lodged against the claims for various informalities. In response thereto, amendments have been made to the claims as suggested by the Examiner. Specifically, claims 1, 4-6, and 11 have been amended to correct their typographical, grammatical, and/or antecedent errors. With regard to the objection lodged against claims 2-6, Applicants respectfully disagree that the claims require the variables of each equation be inserted into those claims. In accordance with 37 C.F.R. § 1.75(d)(1)

and MPEP 608.01(i), various terms and phrases used in the claims can find support or antecedent basis in the specification or description. Throughout the specification, the variables of each equation are recited with specificity. Pursuant to MPEP 2163.01 and 2173.03, Applicants respectfully request that the variables set forth in each of the present claims have support within the originally-filed specification, and those variables need not be repeatedly defined in the present claims. Accordingly, Applicants respectfully request these objections be removed.

Section 112 Rejections

Claim 13 was rejected under 35 U.S.C. § 112, first paragraph. In response thereto, claim 13 has been canceled in its entirety. Accordingly, Applicants believe this rejection has been obviated.

Claim 11 was rejected under 35 U.S.C. § 112, second paragraph. Specifically, the phrase "preferably double or triple layers" was objected to as being indefinite. In response thereto, the objectionable phrase has been deleted in its entirety. Accordingly, Applicants believe this rejection has been obviated.

Section 103 Rejections

Claims 1-7, 9, and 11-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,928,254 to Knudsen et al. (hereinafter "Knudsen") in view of "Improvement of the mathematical modeling of flash measurements," by Blumm et al. (hereinafter "Blumm"). In addition, claims 8-10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Knudsen, Blumm, and Applicant's Prior Art (hereinafter "APA"). In response thereto, Applicants submit herewith in a separate paper a Declaration by Jurgen Blumm, author of the Blumm article, stating that it was not published until March 14, 2003 — six months after the filing of German application no. DE10242741, filed September 13, 2002, from which the present application claims priority. Accordingly, Applicants respectfully request that the non-published Blumm paper be removed from consideration.

Absent consideration of Blumm, which was not published until later, and thus not publicly available to the interested public, until after the filing of the German priority application, Applicants will address the cited reference to Knudsen. Knudsen fails to anticipate and/or render obvious any of the present claims, some distinctive differences are set forth below.

Knudsen does not teach or suggest a decoupler element for decoupling a reference radiation from a beam emitted by a source of radiation, nor does Knudsen teach or suggest a second sensor for measuring the reference radiation having a bandwidth that is substantially wider than a reciprocal value of pulse length, nor does Knudsen teach or suggest an analyzer unit that performs a convolution with the measuring signals of a second sensor by approximating a laser pulse by sections. Present claim 1 contains each of the aforementioned elements, with the decoupler element, second sensor, and analyzer unit working in coordination with each other to utilize the measuring signal for approximating a laser pulse and, thus, a time difference between a zero point and starting point of the laser pulse.

Contrary to present independent claim 1, Knudsen contains no teachings of a decoupler element, a second sensor, and an analyzer unit which works in combination with the decoupler element and the second sensor. For example, the Examiner refers to a decoupler element that is not shown or described on Fig. 1 of Knudsen, but is inferred to be "located below photodiode 19 and between dichroic mirror 17 and the sample 12 along the incident beam path" (Office Action, page 8). If, for some reason, the item below photodiode 19 can be construed as a decoupler element, then somehow photodiode 19 must serve the same function as the second sensor. However, a closer reading of Knudsen clearly indicates that photodiode 19 does not do anything with the measured value, measured radiation, or signal. Instead, photodiode 19 merely samples "in front of the sample 12 . . . to provide a feedback signal to microcomputer 26 if desired" (Knudsen - col. 4, lines 17-20). Knudsen simply does not give any indication of what is being measured or whether a so-called measured value is used.

Claim 1, on the other hand, clearly denotes the second sensor used to measure reference radiation having a particular bandwidth that is wider than a reciprocal value of the pulse width. Moreover, the reference radiation that is sensed by the second sensor is used to forward a value to an analyzer unit, in order for the analyzer unit to perform a convolution with the measuring signals of the second sensor. Thus, contrary to independent claim 1, photodiode 19 of Knudsen is unable to detect the time dependence of the laser pulses, and the only teachings of photodiode 19 is that of a feedback signal sent to a microcomputer. There simply is no information or even a hint of information provided as to what might be the use of the feedback signal in Knudsen that would correlate to that of present independent claim 1. Thus, there is no incentive for a skilled artisan when reading Knudsen to increase the precision of a measurement using a second sensor output value fed to an analyzer unit, along with the infrared

sensor output value in order to modify the detection capability of a device by approximating a laser pulse in sections, as claimed.

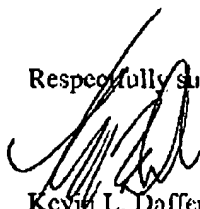
For at least the reasons stated above, Applicants assert that independent claim 1 and claims dependent therefrom (claims 2-12) are patentably distinct over the cited references. Accordingly, Applicants respectfully request removal of this rejection.

CONCLUSION

The present amendment and response is believed to be a complete response to the issues raised in the Office Action mailed April 6, 2005. In view of the remarks traversing the rejections, Applicants assert that pending claims 1-12 are in condition for allowance. If the Examiner has any questions, comments or suggestions, the undersigned attorney earnestly requests a telephone conference.

No fees are required for filing this amendment; however, the Commissioner is authorized to charge any additional fees which may be required, or credit any overpayment, to Daffer McDaniel, LLP Deposit Account No. 50-3268/5887-00100.

Respectfully submitted,



Kevin L. Daffer
Reg. No. 34,146
Attorney for Applicant(s)

Daffer McDaniel, LLP
P. O. Box 684908
Austin, Texas 78768-4908
Ph: (512) 476-1400
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